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AUTHORITY

AGO D/A ltr, 29 Apr 1980

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WASHINGTON, D.C. 20310

IN REPLY REFER TO

AD 859909

AGDA (M) (12 Sep 69)

FOR OT UT 692351

16 September 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 538th Engineer Battalion, Period Ending 30 April 1969


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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

1 Incl  
as

  
ROBERT E. LYNCH  
Colonel, AGC  
Acting The Adjutant General

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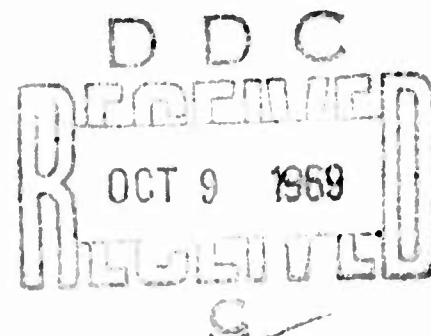
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DEPARTMENT OF THE ARMY 1. Sharr/rd/2630  
Headquarters, 538th Engineer Battalion (Construction)  
APO San Francisco 96232

THCON-AOP

30 April 1969

SUBJECT: Operational Report of the 538th Engr Bn (Const)  
for the Period Ending 30 April 1969 RCS CSFOR-65  
(RI) UIC WBAN AA

1. SECTION 1, OPERATIONS: SIGNIFICANT ACTIVITIES

a. Mission: The 538th Engineer Battalion (Construction) continues to execute its assigned missions by performing the troop construction portion of Camp Samae San Cantonment and Depot Complex and accomplishing civic action projects.

b. Location: The 538th Engineer Bn plus 697th Engineer Co (Pipeline), minus one platoon, are located at Camp Samae San near Sattahip, Thailand. The 561st Engineer Co. (Const), minus one platoon, and D Co, 23rd Engineer Bn (RTA) are located at Camp Lightning, Thailand.

c. Significant Activities:

(1) Camp Samae San Cantonment Area: Camp Samae San is a 1740 man cantonment area required to support the Deep Water Port and Depot Complex. The Battalion has now completed the following facilities within the Cantonment Area (see inclosure No. 3):

<u>No. of Bldgs</u>	<u>Description</u>	<u>Cost</u>
62	EM Billets, 28 Man	\$1,000,000
7	Company Hqs Bldgs	127,200
2	Mess Halls, 750 man	165,060
3	Motor Maintenance Bldgs	43,830
12	BOQ's, 16 man	251,000
1	USO Club	25,000
1	PX/Pascoe, interim	7,193
1	Fire Station	33,840
1	Dispensary/Medical/Dental w/AC	59,280
5	Pascoes, 30'X60'	34,500
1	Thai Mess Hall	10,440
1	Thai Admin Bldg	8,070
1	Latrine Addition	3,167
76	538th Engr Base Camp	108,597
	TOTAL	\$1,877,177

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Inclosure

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Inclosure No. 4 shows completed facilities, those under construction, and future projects. Inclosure No. 5 shows the status of construction during this reporting period. Construction of the water and electrical distribution systems, as well as the sewage disposal system for the area, continues, as does placing fill for 17 miles of roads and parking areas scheduled for paving.

(2) Camp Samae San Depot Complex (Consolidated Supply Activity): The Depot Complex, including headquarters, stock control facilities, and open and closed storage, is now occupied by the 9th Logistical Command. The Battalion has now completed the following facilities within the Consolidated Supply Activity Area:

<u>No. of Bldgs</u>	<u>Description</u>	<u>Cost</u>
1	Dial Central Office w/AC	\$ 38,286
1	9th Log Hqs Bldg w/AC	226,360
6	Pascoe Bldgs, 100'X200'	314,400
1	ADPS Bldg	71,420
1	Stock Control Bldg	40,150
	TOTAL	\$686,616

Incl No. 4 shows buildings completed, those under construction and future projects. Incl No. 5 indicates the status of construction during this reporting period.

(3) Horizontal Construction: Earthwork in preparation for paving roads and parking areas increased to such a degree that all earthmoving platoons were placed under the operational control of the Battalion Operations Section, increasing production. Extensive fill over swampy areas, a prerequisite for any vertical construction at Camp Samae San, continues to be the bane of an efficient road and parking area construction program. Despite this factor during the quarter 35.6% of the roads and parking lots were finished and paved for a total of 63% overall. A total of 288,000 cubic meters of fill were hauled during the quarter. Earth haul capability under the new MTO&E was increased. Additional earthmoving capability included 30 contract dump trucks and a 48" wide automated belt loader. The contract asphalt plant continued to supply the bituminous pavement for the roads and parking areas. 9512 tons of paving were laid during the quarter, with 10,160 tons scheduled for laydown prior to 30 June 1969.

*Incl No. 4*

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(4) Utilities Systems: Completed sections of the water, sewage, and electrical distribution systems have been turned over to the Post Engineer. At this reporting date, the water system is 80% complete, the sewage system 89% complete, and the electrical distribution system 82% complete. Construction techniques, especially on the sewage system and primary electrical distribution lines improved markedly. All systems continue to work satisfactorily.

(5) Security Fence and Lighting: Camp Samae San and the Depot Complex are to be fenced with approximately 10 miles of chain link and wire security fence, the entire perimeter of which will be illuminated with mercury vapor security lights. During this reporting period construction on the fence was initiated, and 1.5 miles installed to date around the Depot.

(6) Base Camp: All buildings in the Base Camp were turned over to the Post Engineer. Base Camp construction is now completed, with the exception of water borne sewage scheduled for the "D" Co Area, (the original Base Camp Site). Units continue to improve the areas with small self-help projects.

c. Civic Action Projects: Civic Action continues to be of command interest in the activities of the battalion. During this reporting period, the 538th Engineer Battalion (Construction) completed one major project, a prefabricated dual-purpose building, in addition to small area projects and medical treatment of Thai Civilians.

(1) Prefabricated Building for Cholburi Trade Fair (Future Thai School Building): This project was a battalion-designed prefabricated building scheduled for dual purpose use, both as public meeting place and a Thai School building. Initially the 24'X48' structure was prefabricated at Camp Samae San (construction time: 3 days) and trucked 70 kilometers north to Cholburi. At the Cholburi Fairgrounds the building was erected on site (erection time: 1 day). The building housed the USARSUPTHAI Special Troops (Sattahip Detachment) display at the annual Cholburi Trade Fair, 6-16 April 1969. The display included a model of the Sattahip Deep Water Port. The building was visited by 500 to 750 people a day, primarily to ask about the construction of the building and its use as a Thai school building. On

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17 April 1969 the building was dismantled and trucked back to Camp Samae San. It will be re-erected on a site near the camp to serve as a three room school building for 150 children.

(2) Medical Treatment: The Battalion Surgeon and his staff treated 678 Thai civilians during the past quarter.

d. Official Visits.

(1) LTG William F. Cassidy, retiring Chief of Engineers, visited the battalion at Camp Samae San on 27 March 1969 to make his last official inspection. In a short speech to all battalion officers, General Cassidy recognized the tremendous effort being put forth by the 538th Engineer Battalion (Construction) and attached units, the 561st Engineer Company (Construction) and the 697th Engineer Company (Pipeline). The General emphasized the important role that the Samae San project plays in the overall Security of Southeast Asia, in conjunction with the Sattahip Deep Water Port and U-Tapao Air Force Base. He closed his remarks with a request for a continued effort towards rapid completion of the project while continuing the high standards of construction quality and professionalism. LTC Streett, CO, 538th Engr Bn (Const) then presented General Cassidy with a bronze plaque in commemoration of his final visit to the battalion.

(2) During this reporting period, the battalion hosted many distinguished visitors. Among these were the following:

10 Feb 1969 BG OTT, CG, USARSUPTHAI  
11 Mar 1969 MG STERNBERG, USARPAC G-3  
22 Mar 1969 BG RAYMOND, DMCSEA, DOD  
27 Mar 1969 LTG CASSIDY, CHIEF OF ENGINEERS  
2 Apr 1969 MG PARKER, USARV ENGINEER  
24 Apr 1969 MG ENEMARK, IG, DA  
28 Apr 1969 MAJ CARPENTER, OCE LNO SEA

In addition, a total of 36 visitors below flag rank visited and observed the activities of the battalion. Itineraries were prepared for each visitor to include a tour of the construction sites and a short briefing.



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e. Organization: Effective 21 January 1969, the 538th Engineer Battalion (Const) was assigned a new modified authorization document under TOE 115E by General Order No. 24, HQ, USARPAC, dated 14 January 1969 for MTOE 115E-PO3. (This General Order had not been received at the end of last quarter, & therefore was not reported at that time).

2. SECTION 2 LESSONS LEARNED: COMMANDERS OBSERVATIONS, EVALUATIONS, AND RECOMMENDATIONS.

a. Personnel:

(1) Battalion Disposition

(i) Present distribution of the enlisted grades in the battalion and attached units is as follows:

<u>538th Engr Bn (Const)</u>	E9	E8	E7	E6	E5	E4	E3/1	TOTAL
AUTH	1	8	32	58	186	431	146	862
ASG	0	8	24	27	153	393	129	734
PDY	0	8	23	23	143	382	127	706

561st Engr Co (Const)

AUTH	0	1	6	13	48	152	30	250
ASG	0	0	5	10	34	126	39	214
PDY	0	0	5	9	34	113	36	197

697th Engr Co (PL)

AUTH	0	1	3	7	26	78	59	174
ASG	0	0	2	6	22	74	54	151
PDY	0	0	2	4	10	54	43	113

Recapitulation

AUTH	1	10	41	78	260	661	235	1286
ASG	0	8	31	43	209	593	222	1105
PDY	0	8	30	36	187	549	206	1016

(ii) Present distribution of the Officers and Warrent Officers in the battalion and units is as follows:



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<u>538th Engr Bn (Const)</u>	<u>Officers</u>	<u>Warrent Officers</u>
AUTH	33	10
ASG	39	9
PDY	38	9

<u>561st Engr Co (Const)</u>		
AUTH	6	1
ASG	6	1
PDY	6	1

<u>697th Engr Co (PL)</u>		
AUTH	5	0
ASG	6	0
PDY	4	0

(iii) Critical MOS shortages are as follows:

<u>MOS</u>	<u>JOB TITLE</u>	<u>GRADE</u>	<u>AUTH</u>	<u>ASG</u>
44C20	Welder	E-5	4	1
51C20	Structures Specialist	E-4	6	0
51C30	Structures Specialist	E-4	6	0
51D20	Mason	E-4	12	2
51F40	Pipeline Specialist	E-7	1	0
51F40	Pipeline Specialist	E-5	9	4
51H40	Construction Foreman	E-6	25	7
62L20	Wheeled Tractor Optr	E-4	72	33
62N40	Construction Machine Supv.	E-7	4	2
64B20	Heavy Vehicle Driver	E-4	56	14
76Y40	Company Supply Specialist	E-5	9	4
76Z50	Senior Supply Sergeant	E-7	1	0
82B20	Construction Surveyor	E-5	5	1
82B20	Construction Surveyor	E-4	3	0
91B20	Medical Specialist	E-4	9	3

(iv) Officers who arrived in the command this quarter are as follows:

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<u>RANK</u>	<u>NAME</u>	<u>TITLE</u>
MAJ	BALDWIN, Joseph A.	S-4 Officer
CPT	ABERLE, Raymand J.	CO, A Company
CPT	THOMPSON, Martin D.	CO, B Company
CPT	HARVILL, Jon P.	CO, D Company
CPT	BEELE, Lynn S.	CO, 561st Engr Co
2LT	STARN, Clifford M.	Asst S-4 Officer
2LT	BAYLOR, Peter N.	Plt Ldr B Co
2LT	FULCHER, Henry R.	Plt Ldr C Co
2LT	RAY, Marting H.	Plt Ldr C Co
2LT	HAMMOND, Edward D.	Plt Ldr D Co
2LT	GEE, Philip C.	Plt Ldr, 561st Engr Co
2LT	BOHLEN, Craig W.	Plt Ldr, 697th Engr Co
2LT	FAY, Dennis P II	Plt Ldr, 697th Engr Co
CW3	ALDERSON, Arthur H.	Maint Off A Co
WO1	JONES, Earl D.	Maint Off A Co

(B) EVALUATION: The present battalion personnel strength is 77.5% of that authorized. Personnel projections offer no relief and losses appear greater than projected gains. The shortages of 51H40, construction foreman, is most critical and is creating a serious impact on the battalion's vertical construction mission. Without this necessary background and experience the battalion will continue to experience difficulty in the maintenance of job site quality control. The shortages of 82B20 Surveyors and 76Y40 Supply Sergeants are second most critical. The present shortage of these personnel is of immediate concern, however the impact will be felt long into the future as untrained personnel handle equipment and try to complete missions above their skill levels.

(C) RECOMMENDATION: That immediate action be taken to fill outstanding requisitions in both critical NCO shortages, and critical MOS slots.

(2) LN Personnel

(A) OBSERVATION: Construction companies maintain LN crews of approximately 180 laborers, carpenters, plumbers, electricians, and masons. With the shortage of 1st line supervisors, the LN personnel idle away many valuable man hours.

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(B) EVALUATION: The number of LN personnel on each job site is being reduced to a workable level that can be managed by section leaders. Lower skill levels are being released in order that fewer but more highly skilled personnel in critical areas can be hired, such as Gradall operators from excess Dillingham-Zachary-Kaiser personnel.

(C) RECOMMENDATIONS: That labor forces be maintained at a manageable level compatible with the availability of supervisors. This organization had a reduction in labor force in January and again in April of this year.

(3) Personnel Section.

(A) OBSERVATION: This battalion's TO&E personnel section was consolidated with the 256th Personnel Service Company, Sattahip Detachment, on 5 March 1969. This personnel consolidation removed people from TO&E slots. On 25 April the Sattahip Detachment of the 256th was moved to Camp Friendship (Korat, Thailand), a distance of 225 miles.

(B) EVALUATION: In the short period of time since the departure of the 256th numerous liaison and administrative problems have come to light. It takes a week to have special orders cut and during the first 60 day period six requests for orders were lost between this unit and the 256th. A check of personal records now requires three days because of the transportation problems. Delays in Military Justice for DD Form 493, (previous convictions), and difficulties in initiating efficiency reports are further examples of problems that have arisen. It is not yet known what impact this consolidation will have on the battalion's efficiency and troop morale.

(C) RECOMMENDATIONS: That TO&E units operating under field conditions retain their organic personnel sections to afford greater flexibility in their mobile situation.

b. Operations

(1) Unit Movement

(A) OBSERVATION: The Headquarters, Supply,

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and Motor Maintenance Sections of the 697th Engineer Company (Pipeline) started the move from Camp Friendship, Korat, on 25 February 1969, and closed in Camp Samae San, Sattahip on 11 March 1969:

(B) EVALUATION: Prior planning and scheduling were coordinated before the advance party was sent to Sattahip. Inventories of equipment and other items were done in Korat and checked upon arrival of each truck closing the Sattahip Area. With the 37 MPH speed limit and approximately 200 mile distance no one vehicle was sent alone; two vehicles making a trip was the minimum. Also, as a precaution weapons and ammunition were sent in two different motor marches. By TO&E, this unit is 100% mobile and the move was made with organic vehicles. The entire move was completed without incident or accident.

(C) RECOMMENDATION: That unit moves be conducted with maximum security measures being observed when coordinating moves by use of communications, careful inventory of items on each truck, and precautionary measures observed when moving ordinance.

(2) Centralized Control of Earthmoving Tasks.

(A) OBSERVATION: Decentralized earthmoving and paving operations were not coordinated efforts. Equipment and operator shortages between companies prevented any one company from massing equipment to expedite operations.

(B) EVALUATION: On 10 March 1969 all earthmoving and paving operations were centralized under S-3 control. The earthmoving platoon leaders were pooled and assigned functionalized tasks. One was assigned pit operation responsibility, another the pad and subgrade preparation, another fine grade, and the last paving operations. These four officers have the battalion earthmoving and paving equipment at their disposal. The companies retained maintenance responsibilities for the equipment and continued to rate officers and NCO's. The centralized system has the following advantages:

(i) Takes advantage of any equipment or personnel shortages.

(ii) Allows concentrated control of mission essential projects.

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(iii) Shortens the span of control by eliminating company operations.

(iv) Allows companies to concentrate on management of other projects.

The system is considered workable only when job sites and the S-3 are in close proximity. By all reports and observation earthmoving and paving operation have improved considerably under the centralized concept, however, close scrutiny of the operation will continue throughout the next reporting period.

(C) RECOMMENDATION: The centralized concept be considered whenever job sites and equipment are located within the same geographical area.

(3) Special Equipment.

(A) OBSERVATION: During this reporting period the battalion received the following items of specialized construction equipment:

(i) GRADALL G-600 hydraulically operated mobile excavator.

(ii) Hydraulically operated boom mounted fiberglass utility basket, mobile "CHERRY PICKER", for use on high voltage primary electrical distribution systems

(B) EVALUATION:

(i) This unit has requested a contract GRADALL for over a year, for ditching, sloping, and erosion control on Route 304 and in Camp Samae San. Terrain conditions on both projects prevented constructive and economical ditching and landscaping along roads, around drainage structures, and in critical excavations. Since the battalion has had one laterally transferred from Dillingham-Zachary-Kaiser excesses, the ditching, erosion control, and drainage structure construction in the Cantonment Area has proceeded with unprecedented speed. The GRADALL is one of the most versatile and efficient machines available for complicated excavating and grading tasks over difficult and hard-to-reach terrain. In swampy areas such as those being built upon in Camp Samae San, this unit has been



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able to accomplish heretofore impossible excavating tasks, especially ditching and sloping along roads and around utilities lines,

(ii) Requirements posed by the sophistication of the high voltage primary electrical distribution system being constructed by this unit demanded a "CHERRY PICKER" for safety, speed, efficiency and versatility. The recent acquisition of such a piece of equipment has improved installation times by as much as 250%, and safety hazards inherent in the construction have been reduced tenfold. This piece of equipment is invaluable to any unit involved in construction of this type.

(C) RECOMMENDATIONS:

(i) That materiel agencies at the highest Army levels seriously consider adopting this piece of equipment as a standard TO&E item in all Engineer Construction Battalions.

(ii) Same as above.

(4) Communications.

(A) Platoon Level Communication.

(i) OBSERVATION: The battalion does not have effective communications at the platoon level.

(ii) EVALUATION: Platoon level communication is vital in the 538th Engineer Battalion (Const). This is the level where coordination is paramount. Job site supervisors must communicate in order to coordinate material pick-up and delivery, equipment disposition, and unit operation. The situation without communication is costly and wastes time. Steps have been taken to alleviate this deficiency with the rental of sixteen (16) contract mobile units, which have not yet been received. When available these mobile units will play a vital role.

(iii) RECOMMENDATION: That, in the absence of TO&E radio equipment, extensive use be made of contract radio equipment.

(B) Single Side Band Radio.

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(i) OBSERVATION: During the past quarter, the battalion added a contract single sideband radio set to the communications net.

(ii) EVALUATION: The single side band unit has been employed to provide a back-up for external communications as well as a link with the 809th Engr Bn in the north. This equipment has proven to be reliable and valuable to the 538th Engr Bn (Const).

(iii) RECOMMENDATION: That the use of the Single Side Band equipment be continued as a primary back up.

(0) Phone Patch Capability.

(i) OBSERVATION: The contract radio equipment on hand provides a phone patch capability to local wire lines.

(ii) EVALUATION: The employment of a phone patch system utilizing radio equipment permits great flexibility, "on the spot" control of job sites and instantaneous coordination with any staff section. This radio-wire integration also permits immediate equipment dispatch to meet crash requirements not predicted by other planning media.

(iii) RECOMMENDATION: That use of phone patch capability be expanded upon.

(5) Construction Scheduling.

(A) OBSERVATION: Conventional time-oriented CPM techniques for construction scheduling are sometimes too limited in scope for construction problems currently encountered.

(B) EVALUATION: This unit has upgraded construction scheduling procedures with CPM studies integrating personnel, material, and equipment requirements. This underlines the most critical areas in project planning. The requirements for both non-standard supply items and non-TOE equipment are most often the critical factor in



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determining completion dates. Using such techniques, the battalion has been able to update and modify construction schedules with accuracy heretofore unrealized. As supply problems occur, mission essential equipment is not available, or new projects are assigned, completion dates are recalculated and adjusted. In addition, any material or equipment shortage problems are forecast with much greater accuracy, allowing timely reaction and formulation of alternative procedures. Observable results have been minimal to date, but positive and profitable feedback is expected.

(C) RECOMMENDATION: That more realistic and positive CPM scheduling techniques be formulated and integrated into training schedules and unit SOP's relative to the more sophisticated scope of mission assignments presently being tasked Engineer Construction Units.

(6) Consturction Supervision and Management.

(A) OBSERVATION: For the 538th Engr Bn (Const) with attached units, 561st Engr Co and 697th Engr Pipeline Co, construction at Camp Samae San has presented problems in scheduling of equipment, assignment of skilled personnel and coordination of the overall construction program.

(B) EVALUATION: A master construction schedule was prepared for both vertical and horizontal effort. The vertical effort data was extracted from existing job directives and horizontal effort computed in cubic meters for known areas to be filled. The horizontal scale of the schedule is unit/time and the vertical is by job directive to the unit. The time for construction is increased by the appropriate addition of supply lead times required. The master schedule has given the subordinate units planning time and assisted in the overall coordination. Construction supervision is assisted by a daily personnel disposition report that indicates the number of personnel both GI and LN on each existing job site. A daily equipment disposition report is rendered by each subordinate unit. Construction inspectors inspect all job sites twice daily. They check quality of construction, criticality of materials, and personnel and equipment available and present. A daily operations meeting is conducted by the Battalion Construction Officer (Assistant S-3) and attended by the company operations officers. The operations meeting covers personnel and equipment disposition and job site inspection reports in addition to planning future work.

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(C) RECOMMENDATIONS: That Construction Management for Military Construction adhere as closely as possible to principles as defined in TM 5-333, "Construction Management" and FM 5-162, "Engineer Construction and Construction-Support Units". The Construction Management principles should be disseminated and understood at the lowest echelons. Supervision of a Construction Program as defined in TM 5-333 and FM 5-162 places management responsibilities at all levels which precludes inefficient management by exception.

c. Training.

(1) OBSERVATION: Training received increased emphasis in the areas of construction management, soldier skills, MOS training, and command directed subjects.

(2) EVALUATION: During this reporting period the battalion, in compliance with AR 350-1 and current training directives from higher headquarters, conducted familiarization firing of individual weapons and completed minimum physical fitness testing. On-the-job training for heavy equipment operators at battalion and company level was highly emphasized. Classes for officers were conducted in Supply Administration, Reports of Survey, and Construction Management, in accordance with FM 5-162, "Engineer Construction and Construction Support Units", TM 5-331 "Management, Utilization of Engineer Construction Equipment" and TM 5-333 "Construction Management". Other classes held for all units included such subject matter as TAERS, SAEDA, Safety, and Drug Abuse.

(3) RECOMMENDATION: Continued emphasis be placed on battalion and company level training in subject matter related to mission directed projects.

d. Intelligence

(1) OBSERVATION: This battalion is not involved in any overt intelligence work. It does, however, report all incidents or unusual occurrences as they occur.

(2) EVALUATION: None of the battalion units or attached units have been subject to overt activities.

(3) RECOMMENDATIONS: That other units take similar action.

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e. Logistics

(1) Reorganization Under New MTO&E

(A) OBSERVATION: The 538th Engineer Battalion (Const) was reorganized under MTOE 5-115E PO3 at the end of the last reporting period.

(B) EVALUATION: The new MTOE, when rendered effective by the receipt of all authorized equipment, will enable the battalion to better accomplish its mission. To date, much equipment now authorized has not arrived, despite O2 priority designators on all requisitions. As a result, certain phases of the construction effort remain delayed due to lack of mission essential major end items, such as one (1) earth auger, two (2) ditching machines, and one (1) 100 KW generator, all of which have been on requisition for five months. Continued delays in filling requisitions for these items dictates continued use of contract equipment.

(C) RECOMMENDATION: That filling major equipment shortages in this command take priority over other organizations.

(2) Construction Supply (Class IV)

(A) OBSERVATION: Class IV supply procedures have been revised considerably, with encouraging results.

(B) EVALUATION: During this reporting period, supply requisitioning procedures were realigned to more thoroughly exercise the entire Army Supply System for critical items prior to authorization for local procurement. Prior to this change, only supply resources in Thailand were tested; now both Okinawa and CONUS resources are screened before local procurement contracts can be let. Such procedures will inevitably reduce gold flow into the Thai economy, but at the same time increase supply lead times on critical items of Class IV material from 60-90 days to 120-150 days. Additionally, an Army Regulation on Local Procurement requires that the supply system be tested for items that are not in the supply system at all i.e. "Non-Federal Stock Numbered" (NFSN) items. This check requires 40-60 days and to date has proved negative in most cases.

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The recent emphasis on exercising the Army Supply System is perhaps justified but does not seem to be logical for items historically not in the depot inventory. These items include AC Roofing, AC Pipe, Jalousie Windows, and bulk items uneconomical to transport. The army supply system may be very effective for recurring demand items like ammo, rations and repair parts. However, since semi-permanent building construction requires such a myriad of nonstandard items above-average experience, care, and expertise is required within all supply activities, including the battalion itself. It also includes all requisitioning and stock control activities.

(C) RECOMMENDATIONS:

(i) That the Army Supply System continue to be tested for FSN items prior to local procurement.

(ii) That the Army Supply System be tested for NFSN items initially, but thereafter requests for the same NFSN item be filled by local procurement.

(iii) That demand data be maintained for NFSN items for consideration as possible additions to the Army Stockage.

(3) Construction Material: Security and Control.

(A) OBSERVATION: The 538th Engineer Bn (Const) has a requirement to provide a great variety of construction materiel which includes lumber, plumbing and electrical hardware, and air conditioning. Material is procured from both the Army Supply System and the Army Procurement Office at Bangkok. Receipt of the material is unpredictable, requiring substitutions to meet beneficial occupancy dates (BOD's). Such frequent substitutions make inventory control difficult.

(B) EVALUATION: To effectively control construction material requisitioned for specific projects, a system was needed to consolidate materials received prior to the required date. The system required consolidation of items in a secure area until issue was made to the project. The course of action taken was to construct bins in a P.A.SCOE



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building being utilized as a warehouse. The material was then consolidated in the bins and issued to the constructing unit project officer prior to the required delivery date. The bins also provided a means for securing critical items.

(C) RECOMMENDATIONS: That units involved in managing several complicated projects consider consolidating construction materials for ease of inventory control and security

#### (4) Construction Materials

(A) OBSERVATION: The present construction mission of this unit utilizes non-standard designs for vertical construction.

(B) EVALUATION: Standard Designs and Bills of Materials are provided in the Engineer Functional Component System (TM 5-301, 5-302 and 5-303) which are based on materials available in the Army Supply System. When using designs non-standard to the Engineer Functional Component System consideration should not only be given to functionality of the design but to the availability of the materials utilized in the design. The most desirable and most efficient time for the material take off is in conjunction with the design when utilizing non-standard design. The non-standard designs produced by 44th Engr Gp (Const) are accompanied by a preliminary material take-off which is proving very beneficial.

(C) RECOMMENDATION: That when non-standard designs to the Engineer Functional Component System are used, full utilization of materials available in the Army Supply System or easily available through local procurement be used. That the designer of non-standard designs prepare the material take off at the same time the design is made.

#### (3) Maintenance

(A) OBSERVATIONS: During this period the battalion has been reorganized under MTOE 5-115E P003. Heavy construction equipment density has increased substantially with a negligible increase in maintenance personnel. As indicated by the MTOE, changes in the maintenance operations within the Equipment and Maintenance Company (Co A)

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The most significant change was in the deletion of the direct support ordnance activity and the addition of a Battalion Maintenance Section. The Commanding Officer, 9th Log Command, now furnishes direct support for tactical wheeled vehicles. The units of the 538th Engr Bn (Const) receive repair parts (PLL) support from the 9th Log Command through the 7th Maint Bn and the 562nd Maintenance Company (LT).

(B) EVALUATION: Command emphasis on maintenance continues and active supervision at all levels of command is evident. Deadline rates have gone down during this period; however, the shortage of qualified operators and drivers is becoming more critical. In most instances the TOE authorizes only one man for an item of equipment, such as a wheeled tractor with its 18 cu yd scraper. For better maintenance and operation this item requires an assistant operator. The use of local nationals as operators, when available, is a help in accomplishing the construction mission, but complicates the performance of maintenance. The battalion has an organic DSU for engineer construction equipment but stocks only those demand supported repair parts used by this DSU.

(C) RECOMMENDATIONS: That command emphasis on maintenance be continued and directed particularly toward operator and driver maintenance. It is recommended that unit maintenance officers instruct platoon leaders, platoon sergeants, and section chiefs on how to inspect the equipment assigned to them so that they may determine whether or not their operators are performing proper before, during, and after operations checks.

f. Organization.

(1) OBSERVATION: This battalion was directed to organize under MTOE 115E-PO03 by general order No. 24 Hqs, USARPAC, dated 14 January 1969. DA annotations in Section III of MTOE 5-115E-PO03, dated 17 December 1968 deleted all equipment projected for HHC, 538th Engr Bn with the exception of the Aviation Section.

(2) EVALUATION: All equipment shortages revealed by the new MTOE were requisitioned on O2 priority. The receipt of the equipment greatly enhances this unit's ability

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to perform sustained earth moving and paving operations.  
A request to correct deletions was submitted through channels  
on 21 April 1969.

(3) RECOMMENDATIONS: While the implementation of  
the "E" Series TO&E will improve the operating capability of  
this battalion, action be taken to implement the newer "G"  
Series TO&E.

g. OTHER: None



ST CLAIR STREETT JR.

LTC CE

Commanding

30 Incls

- ~~1. Location Map~~
- ~~2. Unit Location Map~~
- ~~3. Site Map~~
- ~~4. Plan of Cantonment & CSA~~
- ~~5. Status of Construction~~
- ~~6. Unit Organization~~
- ~~7-30. Construction Photographs~~

Incls 1 - 30 wd Hq, DA



THCON-OP (30 MAY 69) 1st Ind  
SUBJECT: Operational Report and Lessons Learned of the 538th Engineer  
Battalion (Construction) for Period Ending 30 April 1969,  
RCS CSFOR-65 (RI) UIC WMAN AA

DA, Headquarters, 4th Engineer Group (Construction), APO 96233, 21 May 69

TO: Commanding General, United States Army Support, Thailand, ATTN:  
THCP-MH, APO 96233

1. The Operational Report for the Period Ending 30 April 1969, RCS  
CSFOR-65 (RI) UIC WMAN AA for the 538th Engineer Battalion (Construction)  
is forwarded with comments as indicated.

2. Section 2, Lessons Learned: Commander's Observation, Evaluations and  
Recommendations.

a. Personnel:

(1) Battalion Disposition: Concur.

(2) IM Personnel: Concur.

(3) Personnel Section:

(a) Observation: Concur.

(b) Evaluation: Concur.

(c) Recommendation: Non Concur. While it is difficult to conceive  
that the present personnel system will ever achieve even a modicum of the  
efficiency of a unit personnel section, it should be offered the opportuni-  
ty to stand or fall on its own merit.

b. Operations:

(1) Unit Movement: Concur.

(2) Centralized Control of Earthmoving Tasks: Concur.

(3) Special Equipment: Concur.

(a) Observation: Concur.

(b) Evaluation: Concur.

(c) Recommendation:

(i) Concur.

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21 May 1969

SUBJECT: Operational Report and Lessons Learned of the 538th Engineer  
Battalion (Construction) for Period Ending 30 April 1969,  
RCS CSFOR-65 (RI) UIC WBAW AA

(ii) Non Concur. The high degree of sophistication of the electrical distribution system will not normally be found in Theater of Operation Construction.

(4) Communication: Concur.

(5) Construction Scheduling:

(a) Observation: Non Concur. CPM techniques can be as detailed as the user desires.

(b) Evaluation: Concur.

(c) Recommendation: Concur.

(6) Construction Supervision and Management: Concur.

c. Training: Concur.

d. Intelligence: Concur.

e. Logistics: Concur.



K. M. HATCH  
COL, CE  
Commanding

THOP-MH (3 May 69) 2nd Ind

SUBJECT: Operational Report of the 538th Engineer Battalion (Construction)  
for the Quarterly Period Ending 30 April 1969 RCS CSFOR-65 (RI)  
UIC WBAN AA

DA, Headquarters, United States Army Support, Thailand, APO 9623313 AUG 1969

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D.C. 20310

The Operational Report of the 538th Engr Battalion (Const) has been reviewed and is forwarded with the following comments:

a. Concur with the observations at Section 2, para 2a in that critical personnel shortages exist in the battalion. This Hq has taken a number of steps to overcome the personnel shortages in the battalion. These steps include the diversion of personnel from other units to meet these shortages, and insuring that personnel are performing in MOS's for which they were trained. It is anticipated that these actions in conjunction with known gains will ease the shortage of critical skill MOS personnel in the battalion.

b. With reference to the observation in Section 2, para 2a(3) concerning the personnel section it is recognized that administrative problems have been experienced. The transition from the battalion UPO concept to the PSC concept normally creates a few administrative difficulties until such time as effective liaison is established between the battalion PSNCO and the respective divisions within the PSC. Requests for orders being lost or misplaced can occur under any system and is an internal problem within the PSC or battalion. Upon conversion to PERMACAP systems the commander's need to check personnel records will be greatly reduced because he will be furnished various machine rosters containing basic and supplemental personnel data, i.e. monthly personnel information roster, personnel qualification roster, and personnel suspense roster.

c. Reference is made to Section 2, para f concerning HHC, 538th Engr Battalion equipment. This Hq sent a message through ARPAC to DA which subsequently resulted in DA acknowledging their error on equipment and providing requisitioning authority for equipment. DA has informed this Hq that an MTOE reflecting corrections will be published.

FOR THE COMMANDER:

*[Signature]*  
**P.A. LAPORTE Jr.**  
CPT AGC  
Asst. Adjutant General

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Corporate author)  HQ, OACSFOR, DA, Washington, D.C. 20310		2a. REPORT SECURITY CLASSIFICATION  UNCLASSIFIED
		2b. GROUP
3. REPORT TITLE  Operational Report - Lessons Learned, Hq, 538th Engineer Battalion		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Experiences of unit engaged in engineer operations, 1 Feb 1969 to 30 April 1969.		
5. AUTHOR(S) (First name, middle initial, last name)  CO, 538th Engineer Battalion		
6. REPORT DATE 30 April 1969	7a. TOTAL NO. OF PAGES 25	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.  b. PROJECT NO.  c. N/A  d.	9a. ORIGINATOR'S REPORT NUMBER(S)  692351	
		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)
10. DISTRIBUTION STATEMENT		
11. SUPPLEMENTARY NOTES  N/A	12. SPONSORING MIL. AGENCY ACTIVITY  OACSFOR, DA, Washington, D.C. 20310	
13. ABSTRACT		

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DD FORM 1 NOV 65 1473

UNCLASSIFIED

Security Classification